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ABSTRACT

Part of a volume which explores current issues in service delivery to infants and toddlers with handicapping conditions (ages birth to 3), this chapter treats the subject of competencies needed by the early childhood special educator specializing in infancy. First, the following context variables are discussed as they relate to definitions of competencies: the service delivery pattern, program purpose and goals, participation of disciplines within the early intervention program and how they relate to one another, and the uniqueness of birth-to-3 services. Next, common core competencies necessary for any professional working in the area of infant service delivery are described and grouped in four categories: infant-related, family-related, teaming, and interagency advocacy. Within each category, competencies specifically applicable to the infant special educator are delineated (e.g., knowledge of infant cognitive, social, and affective development). Desirable personal attributes (flexibility, maturity, independence, willingness to share, and tolerance) are seen as crossing all disciplines. The final section offers a conceptual model that may be used in considering issues related to delineating personnel standards for service programs, specifying licensure structures for personnel, and designing personnel training programs. References are appended. (JW)

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Defining the Infancy Specialization in Early Childhood Special Education

Eva K. Thorp and Jeanette A. McCollum

EC 211 857

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TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

A final delineation of competencies may be somewhat premature.

❑ For early childhood special education, as for other professions associated with early intervention programs, the infancy period represents a new and still emerging area of specialization. From this perspective alone, a final delineation of competencies needed by the early childhood special educator specializing in infancy may be somewhat premature. Currently, however, there is common agreement on one overarching theme that characterizes infant services; that is the need for flexibility in service delivery. It has even been suggested that, rather than reflecting uncertainty, this very flexibility is quite desirable and may be a unique feature of infant services (Dunst, 1983; Ensher & Clark, 1986). While P.L. 99-457, the Education of the Handicapped Act Amendments of 1986, may result in a bit more homogeneity as standards for services are set, this new law also allows much flexibility in service delivery patterns.

P.L. 99-457 allows much flexibility in service delivery patterns.

Such variations in service delivery influence the roles that the educator fills; these variables provide an important context within which the question of competence must be placed. Thus, the question of competencies needed by early childhood special educators is intertwined with other issues for which guidelines are still emerging. These are addressed in the first part of this chapter.

The question of competencies needed is intertwined with other issues.

While it is true that the field is still in the process of consolidating, the topic of what constitutes competence in the infant special educator and how this is similar to or different from competencies needed by other professionals specializing in infancy has been the subject of wide discussion. A number of sources of information, therefore, are available; these are synthesized in the second section of the chapter.

The final section offers a conceptual model that may be used in considering issues related to delineating personnel standards for service programs, specifying licensure structures for personnel, and designing personnel training programs. These issues can be expected to assume considerable importance in the coming years, since, for example, it has been reported that as many as 90% of the states lack sufficient personnel to serve the infant population (Meisels, Harbin, Modigliani, & Olson, 1986).

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CONTEXT VARIABLES RELATED TO DEFINITIONS OF COMPETENCIES

Service Delivery Pattern

❑ Several aspects of service delivery have implications for the range of competencies needed by the early childhood special educator specializing in infancy. The term *early intervention* is an umbrella covering many types of services funded by a variety of different public agencies and private providers. Determining an appropriate configuration of available services is a task that must be completed by each state, and ultimately by each local area. The configuration of services will be influenced heavily by factors such as geography, population density, funding patterns, and differing philosophies. In some areas, many services may be drawn together under one agency, while in others different services may remain in the hands of different providers. The frequency and intensity of services also may vary widely.

The frequency and intensity of services may vary widely.

Early education is but one piece of early intervention. Early childhood special educators working as infant special educators are probably most

often employed in comprehensive service delivery systems in which a variety of services (social, educational, therapeutic) are available through the same agency, or in which these same services are coordinated for individual families. Although the early childhood special educator would less commonly be employed by those systems providing primarily one specialized type of service (e.g., medical), this type of employment also appears to be increasingly common (Sweet, 1981). The overall array of early intervention services provided by the particular program, and the unique part played by early education as one piece of the total configuration, will heavily influence the competencies needed by the infant special educator employed in that program.

The overall array of services provided will influence the competencies needed by the infant special educator.

Program Purpose and Goals

❑ A second type of variable with implications for personnel competence is the overall purpose, and corresponding goals, of the particular program. One such factor is the population eligible for services. A program limited to serving families in which infants manifest severe disabilities, for example, may be very different from one in which infants are eligible on the basis of being environmentally at risk.

A related variable is the question of who is or should be the primary recipient of services. Is the infant the primary service recipient, as may tend to be the case in medical or therapeutic settings? Are family goals the primary focus, as might be true in a public health or public welfare agency? Is the focus infant goals, approached through teaching the parent to be the primary interventionist, as might be the case in a rural program with limited staff?

Who is or should be the primary recipient of services?

While the family focus philosophy underlying P.L. 99-457 may bring programs somewhat closer together in this respect, different answers to such questions will continue to be influenced by philosophy, geography, and resource allocation. They will have different implications for the roles that infant special educators employed in various settings might fill.

Participation of Disciplines

❑ Intertwined with each of these issues is the question of what disciplines are available within the particular early intervention program and how these disciplines relate to one another. Intervention programs vary in terms of who is included on the early intervention team. Programs employing early childhood special educators range from one-person programs, to those in which the educator is one member of an interdisciplinary direct service team, to those in which the educator participates in a medically oriented diagnostic team. Many disciplines in addition to education should and do engage in early intervention: physical and occupational therapists, speech pathologists, nurses and physicians, nutritionists, social workers, and psychologists are among the most common. Almost all programs, particularly the more comprehensive ones, appear to have someone who functions as a primary interventionist and case manager for each family. Many times the person filling this role is the early childhood special educator (see McCollum & Hughes, Chapter 6).

Intervention programs vary in terms of who is included on the intervention team.

Almost all programs appear to have someone who functions as a primary interventionist and case manager.

Competencies needed are related not just to who is available, however, but also to how roles are defined in the particular program. While the early educators are the experts in infant learning and in developmental and

environmental variables related to learning, they may also often function as primary direct service providers and case managers for families. The teaming model employed greatly influences the extent of knowledge required about other disciplines (see McCollum & Hughes, Chapter 6 and Woodruff & McGonigel, Chapter 8).

In summary, much variation exists in the roles for which the early childhood special educator specializing in infancy must be trained. Infant service delivery varies widely in the settings in which services occur. Intervention may occur in a hospital nursery prior to an infant's discharge, in a home, or in the center—more typical of early childhood programs. The content and process of intervention may vary in each of these settings, depending on frequency of service delivery as well as on the professional composition of the service delivery team. It seems clear that no single model, no single service site, no set number of contact hours is most appropriate for all infants and their families. Rather, service delivery must take into account the unique infant, the family's needs, and the intra- and interagency climate in which services are being planned. The professional must be prepared to adjust to each of these variables ("CEC session...," 1984; Farel et al., 1987; Geik, et al., 1982; NCCIP, 1985).

Service delivery must take into account the unique infant, the family's needs, and the intra- and interagency climate.

Uniqueness of Birth-to-3 Services

❑ Despite the wide variability in service context, there are common themes that guide infant service delivery and clearly differentiate it from early childhood service delivery (Bricker & Slentz, in press). These themes determine the unique competencies of the infant interventionist. With regard to the field of early childhood special education, they suggest those competencies specific to working with infants and those shared by the entire discipline of early childhood special education. These themes include (a) the role of the family in the life of the infant; (b) the unique nature of the infant as learner and the related implications for instruction; and (c) the significance of specific medical issues salient in infancy.

There are common themes that guide infant service delivery.

Role of the Family. In a recent survey of university programs preparing early childhood special educators, 78% of respondents reported feeling that the parent should be the primary focus of infant intervention efforts (Bricker & Slentz, in press). The primacy of the family in infant services seems to be the most widely agreed upon principle of infant service delivery: All articles reviewed for this chapter identified families as key to programming.

Infancy is the period of greatest dependency of the young child. The family environment can affect the future development of the child positively or negatively. Central to the infant's learning and future development is the attachment relationship. The patterns of interactions with significant adults in infancy provide understandings that serve to organize future social and object learning for the young child. Consequently, it is critical that interventionists support this attachment relationship, rather than ignore or impede it. This is especially important with ill or handicapped infants, who may be at greatest risk for interactional failure.

Central to the infant's learning and future development is the attachment relationship.

Infancy is also a period of reorganization for the family. Parents are adjusting to seeing themselves as parents. Successful adaptation to parenthood is aided by feelings of competence in interacting with one's

infant. Thus, programs must attend to bolstering parental competence and self-worth during this period of relationship-building (NCCIP, 1985).

Nature of the Infant as Learner. Several features of the infant as learner suggest early intervention practice and, in turn, suggest competencies. First is the central role that social interaction plays in organizing future learning and competence. Consequently, a key focus of infant intervention should be fostering social and communicative competence in the infant (Dunst, 1983).

A key focus of infant intervention should be fostering social and communicative competence in the infant.

Second, the infant may be less likely to benefit from group interventions than a preschool-age child. Consequently, infant intervention is more frequently individual-focused than group-focused. The professional must view the quality and structure of the dyadic interaction as being as central to intervention as any materials or specific treatments.

Third, the developmental plasticity of at-risk infants makes it difficult to predict outcomes for them, and it suggests that environmental interventions can maximize those outcomes. Further, the nature of sensorimotor learning suggests that the infant learns best through active exploration of the environment. Consequently, the professional may be required to abandon direct instructional strategies and instead become adept at constructing environments that are optimally challenging and enable opportunities for exploration and building upon previous learning.

Finally, infancy is a period of continuing biological organization. Interventions need to be sensitive to the infant's state and the limitations it places upon intervention. Scheduling of intervention must be flexible and sensitive to the infant. Interventionists need to be aware of the degree to which each infant has developed some internal controls for managing environmental stimulation and be able to plan interventions that will assist the infant in that process (Als, Lester, Tronick, & Brazelton, 1982; Vanden Berg, 1985).

Scheduling of intervention must be flexible and sensitive to the infant.

Medical Issues. Several medical issues play particularly significant roles in infant service delivery. First, intervention may begin with infants even prior to discharge from a hospital setting. Consequently, an infant interventionist must be comfortable in that setting, be familiar with the significant vocabulary of that setting, and be aware of the limitations that an infant's medical status may place upon intervention (Bailey, Farel, O'Donnell, Simeonsson, & Miller, 1986; Ensher & Clark, 1986).

Second, infants who are medically fragile, for example those with chronic lung disease associated with prematurity, may achieve a degree of medical stability that enables them to be discharged home; however, they may continue to depend on the assistance of medical technology for survival. Such technologies present a whole host of challenges to families and to professionals working with the infants and their families. Professionals must have some degree of familiarity with these technologies and implications for limitations to intervention. They must further be aware of the many community agencies likely to be involved in treatment efforts with these infants.

Finally, infancy is likely to be a time of continuing uncertainty with regard to medical diagnosis. Thus, infant special educators must have specific knowledge to assist families in negotiating the medical system as they seek diagnosis and treatment.

Infant special educators must have specific knowledge to assist families in negotiating the medical system.

COMPETENCIES OF INFANT SPECIALISTS

❑ An early statement of the qualities of an infant interventionist can be found in a 1981 position paper of the Division for Early Childhood (Cohen, Givens, Guralnick, Hutinger, & Llewllyn, 1981). Since that time, there has been continued elaboration of these qualities. The task of delineating specific skills and abilities of professionals who choose to work with high-risk and handicapped infants and their families has been addressed by universities preparing infant services personnel (Bailey et al., 1986; Bricker & Slentz, in press; Farel, Bailey, & O'Donnell, 1987; Geik, Gilkerson, & Sponseller, 1982; *Guidelines for infant personnel training programs*, 1984; Mallory, 1983; Northcott, 1973); by state agencies (Illinois State Board of Education, 1985; Williamsburg Area Child Development Resources, 1985); by consumers and professionals in the field (Fewell, 1983; Garland, 1978; Healy, Keesee, & Smith, 1985; Hutinger, 1984; McCollum, 1987; Ryan, 1982); and by national education and advocacy organizations ("CEC session...," 1984; Cohen et al., 1981; National Center for Clinical Infant Programs, 1985; National Easter Seal Society, 1986; Weiner & Koppelman, 1987). There is substantial agreement among these diverse groups about the competencies required for infant service. It is significant to note that most of these discussions have occurred within the past 5 years. Thus, it must be expected that, as this field grows and matures, the competencies described will represent a working outline that should and will be modified further as experience with infant service delivery increases.

These skills are required of all members of the infant service team.

The following discussion is divided into two parts. The first addresses those skills required of professionals, whatever their disciplinary training, who will be interventionists with infants with special needs and their families. These skills are required of all members of the infant service team, whether or not they serve as primary provider. These competencies will be termed the *common infancy core*.

These competencies will be termed the common infancy core.

In addition to common infancy core competencies, any professional involved in infant intervention would possess the competencies of his or her larger discipline, as well as specialized infancy-related competencies unique to that discipline. The second section discusses the infancy specialization competencies of the early childhood special educator. Hence, the early childhood special educator specializing in infancy would be expected to be trained in the total array of competencies discussied in these two sections.

Common Infancy Core

❑ The common infancy core competencies fall into four broad categories of knowledge and skill:

- Those that are infant-related.
- Those that are family-related.
- Those that are related to functioning as an effective member of a service delivery team.
- Those that are related to functioning as an interagency advocate for a child and his or her family.

There are also a variety of personal qualities that appear to be especially critical for any professional involved in infant service delivery.

Infant-Related Competencies. It has been suggested that the central competency that organizes all other infancy-related competencies is the ability to learn from observation (Healy, Keesee, & Smith, 1985; NCCIP, 1985). The subtleties of infant behavior and the often fleeting nature of their responses require that the infant interventionist be adept not only at eliciting behavioral responses for the purpose of assessment and intervention but also at deriving information through systematic observation.

The central competency is the ability to learn from observation.

To make skilled use of observation requires an understanding of normal infant development. There must be sensitivity to the remarkable rate of development in infancy as well as an understanding of the unique relationship among domains of development in infancy. There must also be an understanding of atypical development and the potential medical complications of infancy. Given the increased survival of younger and more medically fragile infants, a knowledge of the potential impacts of prematurity on infants is vital, as is an understanding of the unique characteristics of the premature infant. A healthy understanding of the unknowns with regard to the development of premature infants would also be desirable.

There must be sensitivity to the rate of development.

Knowledge of potential impacts of prematurity is vital.

The infant interventionist must be able to assess infants, using the strategies of his or her own particular discipline, for the purpose of planning appropriate interventions. This may require the ability to obtain assessment information through observation of another professional actually assessing an infant—as in a transdisciplinary model. It may further require the ability to conduct assessments in collaboration with parents, in some instances actually coaching the parents to perform assessment items.

Family-Related Competencies. Families have come to be seen as resourceful collaborators in infant services in the assessment, planning, and intervention processes. There is increasing recognition that the central competency related to family services is increasing the ability to support family strengths rather than focusing on family deficits or grieving as the central force in family life (Dunst & Trivette, in press).

The central competency is increasing the ability to support family strengths.

To accomplish these goals the infant service provider must have an awareness of family systems, of the roles of different family members in the life of the family, of the degree to which a family is part of a larger social network, and of the impact that network might have upon the intervention process. The provider must be sensitive to different family constellations and the way in which the family defines itself (Geik et al., 1982).

The provider must be sensitive to family constellations.

A family-focused program provides support to family members in developing patterns of interaction with their infants that will undergird future learning. This requires that professionals attend to the family environment of the infant, that they recognize family strengths, and that they possess an understanding of sources of vulnerability in families—sources of vulnerability unique to the transition to parenthood, to the particular family and to adaptation to an infant with special needs, as well as those resulting from social and economic pressures (NCCIP, 1985). This further requires that professionals possess skill in relating to adults in the family and in supporting and assisting parental competence to enable family members to fulfill their roles in supporting and nurturing the infant in preparation for his or her entry into the world (Cohen et al., 1981).

Coordinated services require interdisciplinary collaboration.

Teaming Competencies. Providing coordinated services to special needs infants and their families requires a great deal of interdisciplinary collaboration. Two broad categories of skills are needed. The first requires that team members from multiple disciplines have a common vocabulary that enables them to share their disciplinary expertise, to plan interventions jointly, to incorporate parents in planning, and to incorporate shared disciplinary knowledge into their own interventions. The second requires that each team member possess the process skills necessary to work with others as part of an effective decision-making and treatment unit.

Each acts as a consultant to other team members.

The first category of skills—the ability to integrate knowledge from other disciplines into one's own disciplinary interventions—suggests several competencies. Each infant intervention team member acts as consultant to the other team members. This requires the ability to translate the central concepts of one's own discipline for other professionals in a way that will enable them to integrate the concepts as necessary into their own interventions. For example, the special educator, versed in cognitive development, learning, and motivation, can suggest to a physical therapist a cognitively motivating activity around which to organize a movement intervention. Similarly, a physical therapist can demonstrate to a special educator specific positions that will promote function during a learning activity. In pursuing this common vocabulary, all team members will be better able to provide integrated services to the child and promote carry-over in many settings (Bailey et al., 1986; Bricker & Slentz, in press).

Team process skills include an understanding of models of team functioning.

The team process skills necessary for the infant interventionist include an understanding of models of team functioning. This includes an understanding of the ways in which team functioning is influenced by the staff available and the purpose of the team. It also requires an understanding of the ways in which performance of a disciplinary role in both assessment and service delivery might be influenced by a particular model of team functioning, for example, transdisciplinary versus interdisciplinary (McCollum & Hughes, Chapter 6).

Team process skills require an understanding of communication strategies.

Finally, possessing team process skills requires an understanding of (a) communication strategies that promote effective teamwork; (b) approaches to decision making and conflict resolution appropriate to interdisciplinary teams; and (c) the unique role contribution of team membership and team leadership (Geik et al., 1982).

Interagency and Advocacy Skills. Given the interagency climate in which infant services are provided, infant interventionists must have an understanding of the larger service delivery context. Given the language of P.L. 99-457 and the emerging picture of varying lead agencies (NASDSE, 1987), this will continue to be a critical competency. Infant interventionists must be aware of the legislative initiatives that guide infant service delivery locally, at the state level, and nationally. They must be aware of parental rights and of their own associated professional responsibilities. They need to be aware of the range of services available to a particular infant and family in the community and how to access those services. Finally, they must be able to apply their teaming skills to working with representatives of other agencies on behalf of a particular family. They must be able to "de-discipline" themselves in order to avoid duplicating services, instead making best use of the broad range of resources available in any community (Bailey et al., 1986; Ensher & Clark, 1986; NCCIP, 1985).

Infant interventionists must be aware of legislative initiatives.

They must be able to "de-discipline" themselves.

Personal Attributes of the Infant Interventionist. One category of competency deserves special attention because it crosses all disciplines and is of equal import to all. That is the set of personal attributes necessary to function successfully as an interventionist.

One category crosses all disciplines.

This category presents many questions: How do we measure these attributes? Must someone enter a training program already possessing them? Which can be learned? Which require experience? Which are central? Which are nice but not critical? Despite such questions, we report the following competencies because there is substantial agreement about their importance (Bricker & Slentz, in press; "CEC session...," 1984; NCCIP, 1985).

1. *Flexibility.* The infant specialist must be prepared for the fact that things may not go as planned. A child may be sleeping, may be ill; parents may have suffered a crisis; plans must change.
2. *Maturity.* There is a need for great sensitivity. Families with new infants are readjusting their own identities as families. The infant specialist must step cautiously around these emerging boundaries, valuing the relationship parents have with their infants, and resisting the temptation to shape the family to his or her own definition. It has been suggested that infant interventionists must themselves be parents. While systems cannot realistically apply such a requirement, the idea does suggest that special attention be paid to these family competencies and that the infant service provider must have great appreciation for the sorrows and also the joys associated with parenting a special needs infant (Geik et al., 1982). Certainly if infant interventionists are not parents, their professional behavior should suggest to parents that they understand the family experience and can be trusted.
3. *Independence.* Infant specialists often work alone, not in the safety of a classroom under the umbrella of a larger system. Thus, the infant specialist needs to be able to take initiative, to step comfortably into many medical, social service, and educational settings, and to work productively in home settings.
4. *Willingness to share.* Since disciplines overlap in infant services, the infant specialist must be willing to share knowledge rather than protect it. Interventionists must also be comfortable with what they do not know. Sometimes they must be prepared to drop altogether their disciplinary cloak in response to the needs of parents or children.
5. *Tolerance.* Finally, and perhaps most important, the infant interventionist must have great tolerance for change (NCCIP, 1985). The field is changing; legislative mandates are changing; disciplinary knowledge is changing; individual families are constantly changing. Change is inherent in the speciality, and tolerance for change—perhaps even a preference for change—is a significant competency.

Infancy Specialization in Early Childhood Special Education

❑ The competencies just described represent a common core necessary for any professional working in the area of infant service delivery. As such, they would also apply to the infant special educator, whether functioning as the sole child development specialist in a rural infant program or as a special educator on an infant service team with a full complement of

interdisciplinary professionals. In addition to these core competencies, infant special educators also must possess the competencies that tie them to the larger discipline of early childhood special education, as well as those specialized competencies that are the early childhood special educator's unique contribution to infant service delivery.

Infant-Related Competencies. Infant special educators are experts in infant cognitive, social, and affective development. This requires an understanding of sensorimotor intelligence and the nature of the problems that become the focus of infant learning. Based upon this understanding of infant learning, infant special educators must possess the formal and informal assessment skills to be able to analyze each infant's understanding of his or her environment and then apply what has been learned to planning intervention (Illinois State Board of Education, 1985).

Infant special educators must possess formal and informal assessment skills.

The assessment skills required of infant special educators include being able to (a) use observation as an assessment and (b) derive central assessment information from observing the infant alone at play, from observing other professionals' assessments, and from guiding parents as partners in assessment. Infant special educators must be able to integrate information from formal and informal tests as well as observations to answer specific questions about the infant's development, about the impact of handicaps on development, and about the role of temperamental and affective style in learning.

The contribution of the infant special educator to intervention lies in the ability to construct learning environments that provide opportunities for the infant to accomplish the learning objectives set jointly by the family and professionals. This requires the ability to integrate knowledge of the child derived from all disciplines involved with the child into construction of these environments, and to plan developmentally appropriate and challenging interventions. The special educator must be able to incorporate into the intervention specific environmental adaptations such as positioning and translate the intervention goals into intervention settings and activities that have meaning and value for parents (National Easter Seal Society, 1986; NCCIP, 1985).

The special educator must be able to incorporate specific environmental adaptions.

Finally, infant special educators must be adept at instructional and interactional strategies that promote learning and development in infancy. Infant interventionists must be able to support the parent-child interaction as central to intervention and assist parents in using the home setting as a learning environment. They must possess the skills of data collection and evaluation that enable them to judge the appropriateness of interventions and the directions in which they might go.

Infant special educators must be adept at instructional and interactional strategies that promote learning and development.

Family-Related Competencies. The family intervention skills required of infant special educators are those of collaborator and consultant (Geik et al., 1982). They must possess the skills to include parents in planning and intervention. This requires valuing family priorities as highly as program priorities. It requires knowledge of strategies for assessing family needs, as well as for assessing the resources families themselves can bring to bear in meeting these needs. Where outside resources are required, interventionists need to be able to assist families in accessing resources. Family consultant skills further include the ability to promote interaction between parent and child. Interventionists must be skilled in working through the families, as well as in working directly with infants.

Family intervention skills are those of collaborator and consultant.

The unique family-related task of infant special educators might best be termed *intervention coaching*. Tney must be able to assist families in identifying and promoting those aspects of their interactions with their child and those aspects of the home environment that most seem to facilitate learning. As intervention coaches, infant special educators must be able to assist families in problem-solving ways in adjusting the home environment to better facilitate learning. They must further be able to translate family goals into workable educational units. They must therefore have such a clear understanding of each child's developmental status and needs that they are able to adjust intervention strategies to settings relevant to the life of the family. This might include such diverse settings as church, a shopping mall, or a restaurant.

They must be able to translate family goals into workable educational units.

It is often the case that the infant special educator is the primary agent for delivery of home-based services. In that role the interventionist is a guest in the home of the family, and must be sensitive to that status. In the intimacy of the home setting, the interventionist will very likely gain information about the family that will facilitate understanding of family needs as they relate to the family's ability to participate in intervention with their child. This information becomes central to team planning and to the educator's own plan of action. It also requires the ability to balance confidentiality with sharing information with appropriate team members.

Teaming Competencies. The teaming competencies discussed in the common core competencies relate as well to infant special educators. They must possess the process skills of team membership and team leadership that promote communication and problem solving on the team. They must also be able to translate the language of their discipline so that the team can incorporate cognitive, affective, and social information while developing an integrated program plan for a child. Similarly, they must be able to integrate the knowledge provided by other disciplines into planning educationally relevant interventions.

Additionally, funding and staffing patterns are such that infant special educators are often the full-time primary agents of service delivery, with other disciplines functioning as consultants or providing less frequent direct treatment. In those instances, the educators must possess the skills of case coordinator, of "educational synthesizer" (Bricker, 1976). They must be able to translate and integrate for families the information from multiple disciplines and assist families in carrying out recommendations from the other disciplines concerned. Finally, they must possess what might best be termed the humility or self-knowledge to know when it is appropriate to call upon other disciplines to assist in intervention with a particular child and family.

Interagency and Advocacy Competencies. The contribution of infant special educators in this area of competency is their knowledge of the special education and early childhood service delivery system as it fits into the larger interagency system of the local community, the state, and the nation. Consequently, infant special educators should be well versed in relevant special education legal mandates related to services for special needs children and their families. They must clearly understand the procedural safeguards of all legislation and be able to provide families with knowledge of their rights under any legislation that applies.

They must understand the procedural safeguards of all legislation.

Infant special educators must understand state and local regulations as they relate to federal policy—specifically, how such regulations affect

the referral and intake process, timeliness of evaluation, program planning, review, and referral to the next placement. In the latter regard, infant special educators offer to teams a knowledge of early childhood and special education placements available in the community that are most appropriate to each child's future educational needs. Thus they function as transition specialists within early intervention programs.

Educators should be aware of formal and informal community resources.

Finally, educators should be aware of formal and informal community resources providing case advocacy and advocacy training for parents of children with special needs. Infant special educators must be able to walk the fine line between being system employees and active advocates for children and their families.

A MODEL AND SOME RELATED ISSUES

❑ It is clear that careful attention must be given to the specialized training needs of early educators who choose to work with infants and their families. However, the development of programs directed toward this need is itself still in its infancy. Few states currently have certification standards that require such training (Bricker & Slentz, in press). Although federal funding of personnel preparation programs has begun to yield some excellent models, training is not yet widespread (Brown & Thorp, 1986). Moreover, while some programs are beginning to prepare personnel for this specialization, the extent of specialized training varies tremendously across programs (Bricker & Slentz, in press). This situation undoubtedly will undergo rapid change as states reply to the mandates of P.L. 99-457 to implement full services by 1990.

Development of programs is still in its infancy.

Extent of specialized training varies across programs.

Preparing personnel for a specialization in infancy is a challenge that must be faced not only by early childhood special education, but by other disciplines as well. As states choose lead agencies and develop comprehensive plans for service delivery, personnel standards must be developed. The implications of these standards for certification and licensure must also be addressed.

As states choose lead agencies, personnel standards must be developed.

There is now substantial agreement in the field about the competencies needed by infant interventionists. Discussions related to competence have given way to new issues concerning how these competencies are to be acquired and at what level of expertise. Is it a lofty goal that all professionals working with special needs infants possess all of the competencies described in the preceding sections? Is it, in fact, a necessary goal? For example, should a paraprofessional possess the interagency and advocacy knowledge that a program administrator possesses? Which competencies are necessary for which program roles? Educators need to examine the categories of competencies provided here and use them as a guide to describe the specific competencies required of individuals in different roles.

Which competencies are necessary for which program roles?

A second issue that should become the focus of ongoing discussion is the degree to which some competencies are to be required of entry level professionals and which are to be required or refined as a result of experience. Clearly, attention must be paid to both differentiated preservice and inservice training (Healy et al., 1985). Again using the categories of competencies described in this chapter, planners and trainers could develop a framework by which competencies are identified as acquired in preservice training, as a result of continuing education or inservice training, or as a part of on-the-job experience. A related question

Attention must be paid to both differentiated preservice and inservice training.

concerns who is to provide specialized training to these personnel, and at what level.

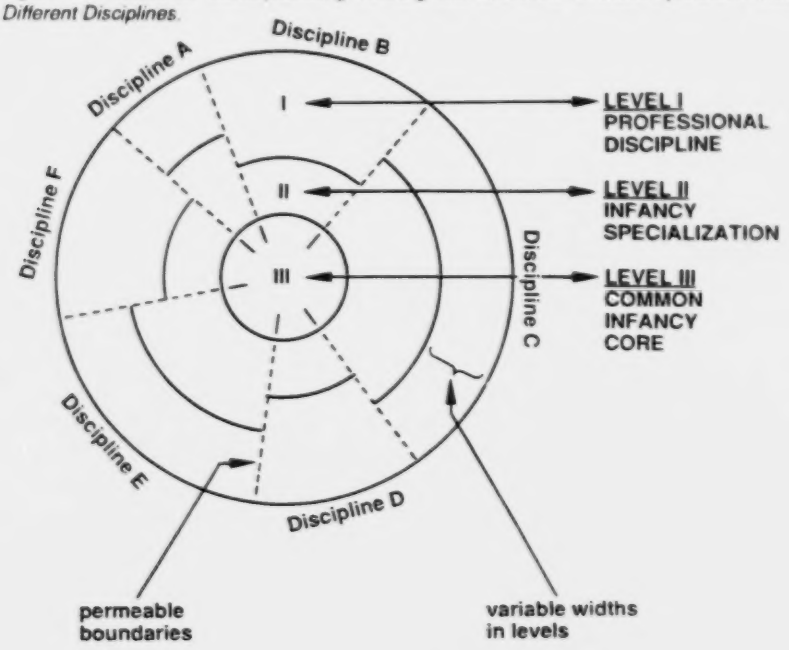
Figure 1 provides a conceptual model for addressing these important questions. The circle as a whole represents all disciplines that might be included on an early intervention team, with each wedge depicting one discipline (e.g., education, social work, medicine). The varying width of the wedges indicates the varying degrees to which different disciplines may be involved in early intervention programs.

Within each wedge, there is a general body of knowledge and skill (Level I) that a professional belonging to that discipline will be assumed to possess (e.g., the professional knowledge of speech and hearing science or early childhood special education). Level II represents the more specialized disciplinary content related to the infancy period. For many disciplines, including early childhood special education, Level II is a new specialization, with new content. For example, most speech and language pathologists, occupational therapists, and social workers do not currently receive specialized training for the infancy period. It is not yet clear how this new content will be integrated into professional training and licensure structures which, until now, have been restricted primarily to Level I. What is clear, however, is that training and licensing at Level II is a disciplinary responsibility that must be addressed by each discipline. One primary focus of this chapter, for example, has been the delineation of Level II content for the early childhood special educator.

Most speech and language pathologists, occupational therapists, and social workers do not currently receive specialized training for the infancy period.

In contrast to Levels I and II, which represent disciplinary specializations, Level III contains a core of common knowledge and skill needed by all professionals working in early intervention. These have been elaborated in previous sections. Level III is not clearly the domain of any one particular discipline, and there may be many advantages to providing this common core throught an *inter*disciplinary training setting.

Figure 1. A Model for Conceptualizing Training and Licensure of Infant Specialists from Different Disciplines.



Another important feature of Figure 1 is the permeability of the boundaries between disciplines. The nature of the infant and his or her developmental needs demands that each discipline have access to and understanding of the interrelationships among disciplines. This may be illustrated, for example, by the early educator's need to understand medical terminology. Boundaries between levels also must be flexible, as shown in the varying width of Levels I and II; in any one discipline, the lines between Levels I, II, and III may be less distinct than in another discipline.

Boundaries between levels must be flexible.

For states or professional organizations developing personnel standards for early intervention, Figure 1 can guide thinking and problem solving in relation to licensure and certification, who should provide training in relation to any particular discipline/level combination, and when this should occur during the professional training period. For any particular personnel preparation program in early childhood special education, the issues to be addressed are: What content can the program reasonably offer (Levels I, II, and III) at a high level of quality? Which disciplines should be encouraged to participate in this training and at which level? How should program offerings differ for students from different disciplines? Competencies, coursework, and practicum experiences should clearly reflect the differing needs of these different types of students. Questions in relation to licensure are similar, and must be recognized and addressed by states and professional organizations developing standards for certification and for personnel preparation programs.

Many issues must be addressed by states, professional organizations, and personnel preparation programs.

It is clear that many issues must be addressed by states, professional organizations, and personnel preparation programs in terms of clarifying professional responsibility and disciplinary responsibility within the field of early intervention. Much of this clarification will come about as the boundaries and variations within early intervention service delivery systems become more clearly defined. Competencies needed by infant specialists in all disciplines, including early childhood special education, will become clarified as part of this process of growth.

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